E/ECA/TCD/44

UNITED NATIONS TRANSPORT AND COMMUNICATIONS DECADE IN AFRICA, 1978-1988 (UNTACDA)

INFORMATION ON AFRICAN TRANSPORT TRAINING INSTITUTIONS

June 1987

UNITED NATIONS

FORWARD

The need to prepare this information booklet on African Transport Training Institutions is considered important by the Transport, Communications and Tourism Division of the Economic Commission for Africa in order to provide information on the availability of Training Institutions in Africa and what they can offer to train African transport personnel in the field of Transport.

African governments, to play their roles in developing their rural transportation systems, to impvore intra-African trade and also for Africa to play its role in international transport, one of the main pre-requisites would be the training and provision of skilled manpower in all fields of transport.

Currently shortage of both trained manpower in all fields of transport and training institutions are highly felt in Africa. Thus there is the urgent need to improve the quality of human resources at all levels of transport modes and the improvement and/or the establishment of well equipped Transport Training Institutions. Another weakness in African Transport Training programmes is lack and shortage of qualified instructors.

There are two types of Transport Training Institutions that have so far developed in Africa. Many African countries have their National Transport Training Institutions established basically to satisfy their training requirements at home. Some of them, due to some arrangements among African countries in view of existing pressing needs, have been converted into a subregional institutes and examples are Bandari College Mombasa and Addis Ababa Airlines pilots and technicians training centres. Kenya and Ethiopia, owners of these centres, are independent in the management of the centres but functionally their training centres have been more or less converted into subregional institutions.

The other type of Transport Training Institutions development is the establishment of Transport Training Institutions originally designed to serve subregional or regional training needs. Such training institutions are either financed purely by UN Agencies or in conjunction with beneficiaries.

The prime purpose of this booklet is therefore, to provide basic information on available/existing subregional/regional African Transport Training Institutions, where ever possible with information on location, training facilities avaialble, type and duration of courses and other relevant information. By way of information a list of Natiional Training Institutions by modes of Transport of some African countries is also provided.

Economic Commission for Africa will be grateful if African Governments go through the booklet and give their opinion on the preparation and also provide additional information on those subregional Transport Training Institutions not included.

The booklet is also intended to bring awareness to African Governments what Transport Training Institutions are available in Africa so that utilization of African institutions could be optimized. African governments have high training costs at present either in running Transport Training Institutions in their subregion or to train their cadres outside Africa. It is believed that minimization of training costs can be greatly achieved if training opportunities are developed within Africa, wherever and when ever possible, by Africans.

Economic Commission for Africa would like to extend its sincere thanks to those member governments, to UN specialized Agencies (IMO, UNCTAD etc), to African Transport Training Institutions for their quick response to its letter reference ECO 530/TCT/TRS/0456 of 3/6/85 regarding collection of information on the preparation of this compendium. It is its sincere hope that it will receive regularly information of any changes that may occur from time to time on the existing training institutions and also on those to be newly established and/or information not yet provided.

The booklet contains African Transport Training Institutions in the fields of Railways, Maritime (shipping and ports) and Air Transports. Information was not available on Road and Inland waterways Transports Training Institutions in Africa. No information was also available on pipeline. Multipurpose Training Institutes like Eastern and Southern African Management Institute (ESAMI) is briefly discussed.

M. Bongoy, Chief
Transport, Communications and
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CHAPTER I

Introduction and Background

African Governments have to cope with high technology in all modes of transport they develop in their respective countries. Air and Maritime transport industries, with high technology, require technically and managerially highly qualified staff to manage and run them. Rail and Road transports, which consume high maintenances costs, ought to have skilled manpower and well trained engineers to efficiently provide and maintain transport infrastructure and daily operations of services. Inland water transport and pipe line, which are least developed in Africa, should be given special attention and one of the measures ought to be taken would be the training of qualified personnel in the fields.

The importance of training in the fields of all modes of Transport is universally accepted and the need is more urgent in the African scene. In Africa there have been many difficulties in developing training centres, training materials etc. in the field of Transport due to lack of: capital, training policies, skilled manpower for course developments, management and organizational set-ups.

Training requirements

All modes of transport both state, public and privately owned ones, face serious managerial and technical problems.

In road transport enterprises training of top, and middle level management are urgently required. Also at the level of Transport Ministries, public works Departments, public transport sectors, training transport planners, engineers, traffic managers, economists, maintenance personnel, mechanics, drivers and operators etc. are required.

In the field of Railways and Rail Transport trainings of senior, middle management and at the level of design making are required. In addition professionally oriented vocations, pre-service and in-service trainings etc. are required.

In Inland Water Transport the main strategy to meet the training requirement should be the training of the managerial and Administrative staff. This move will help to widen the theoretical and practical knowledge as well as professional skill in the field of inland water transport management, organization and plannings. Courses and workshops should also be encouraged.

Air Transport is of modern age. Its training requirement is more sophisticated and so far studies have revealed that most of the African airlines have not yet adequately paid attentions to both management and technical fields of trainings.

Maritime Transport is a mode of Transport which is wide and fragmented. There is the mode of transport which is the ship which indeed requires extensive training of technical staff such as deck, engin offiers and other crew members, training of shipping company managers, planners, accountants etc. On the other

hand there are institutions such as ports, stevedoring companies, freight forwards, other Agencies etc. that equally need extensive training programmes such as port management, planning, port engineering, pilots and other technical staff etc. In the field of stevedoring good knowledge of cargo stowage planning and loading/unloading techniques must be the acquired. Freight Forwarders and other Agencies should have good knowledge of International shipping business which include shipping law, maritime law, Insurance etc.

Maritime Transport in general is so extensive that its training requirements are very wide.1/.

Training Facilities

It is very interesting to note that in some modes of Transport practically exist no training facilities or very few and inadequate and in other there exist and are underutilized.

If we take the field of maritime transport apart from National training centres that each country runs, there are subregional/regional centres both for shipping and ports. These are:

- Eastern/Southern Africa; for ports-Bandari Colleges, Mombasa and Dar-Es-Salaam and for ships the Madagascar training institute at Mahajunga.

- West/Central Africa; for ports-Mano River Union Training Centre in Liberia and for-ships the Regional Academies at Ghana and Abidjan. There is also the Nautical College of Nigeria which was established long time ago. Cameroon is establishing one in the near future. These centres also provide courses in port operations and management.

- North Africa, for ports the Alexandria Maritime Academy provides extensive short and long term courses apart for what it provides for Deck, Engine and Radio officers. The Regional Arab Institute for ports and shipping in Tunis provide also courses both in ports and shipping fields.

These training centres and many others of national characters are underutilized and the main reason is that their activities are fragmented and uncoordinated. The various trainers both in port and shipping fields put their efforts to identify their training requirements and co-ordinated their programme in such a manner that joint training strategies at sub-regional and regional levels could be organized. These institutes should be able to offer integrated courses.

On the other hand if we consider road and Inland water transports there are no adequate training facilities of good standards and the problem is crucial. In road transport no institution solely devoted to management, planning, administration, traffic and operations exist. The only exception is in Tanzania

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1/ ECA/UNDP/World Bank African Transport Study on scope, Approach, and Implementation of Human resource Development - ECA 1986

which is a national training centre. For inland water transport there are a number of training centres noteably the Central Training Institute for Inland Water Transport in Cairo, a similar ones in the Khartoum (Sudan), Kinshasa (Zaire) Bangui, (CAR) and Monkey Bay (Malawi). These centres are serving national interests first. Some of them can be converted into subregional centres.

Each of the railway establishment in Africa has a local training centre and the services are limited there. Union of African Railways has, however, identified four subregional training centres in Congo, Zambia, Egypt and Nigeria. The one in Congo is progressing towards becoming a sub-regional one. The rest are also progressing requiring financial as well as technical assistances. When all become operational it is believed that adequate facilities would be acquired.

Air Transport has training facilities in Africa from one classroom level to modern complex set ups. In most air transport organizations short trainings are given on an ad-hoc basis in order to accommodate immediate requirements especially in the field of sales and management. In order to have a systematic and planned training programme African Airlines training centres should be reviewed.

There are a number of sub-regional training centres for pilots and Technicians and the main ones are the Addis Ababa and the Mvengue centres in Ethiopia and Gabon respectively and the Soroti (Uganda) one. For Civil Aviation are in Kenya and Niger and are operational.

Africa's training requirements in transport fields and existing available facilities for training should be considered side by side and studied simultaneously. It is always cheaper and shorter to train African personnel in the field of transport here in Africa itself. But to meet actual requirements the design of the centres should be cost effective. No African country can afford to establish either national or subregional training centre for under-utilization. Subregional and Regional co-operations are very important here also and it should be encouraged.2/.

2/ Report of a Regional survey on Manpower and Training needs in all transport modes, ECA 1986.

CHAPTER II

Subregional/Regional Transport Training Institutions in Africa

a. Rail and Railways Transport

The Union of African Railways (U.A.R), through its devotion to establish four subregional railways training centres and in compliance with the objective of the Transport, Communications Decade for Africa 1978-1988, introduced a project to ECA for setting up the following four subregional railways training centres at an estimated cost of $US 57.25 million.

Brazzaville "Congo" Centre ($26.25 million)

Zaria "Nigeria" Centre ($15.0 million)

Warden "Egypt" Centre (1.0 million)

Kabwe "Zambia" Centre ($15.0 million)

During the 10th General Assembly of UAR held in Cotonou, People's Republic of Benin, in November 1982, the offer of Kenya Railways to provide management training for African countries in its Railway training Centre in Nairobi was Accepted.3/

In the following pages are provided further descriptions of the centres.

(i) Ecole Superieure Africaine Des cadres du Chemin de Fer (ESACC)

The Union of African Railways (U.A.R), during its fourth General Assembly, convened in Accra in October 1976 agreed to locate Ecole Superieure Africaine Des Cadres du Chemin de Fer (ESACC) in Brazzaville, People's Republic of Congo.

The French Government agreed to assist the project through Fonds d'Aide et de Co-operation (FAC) and an initial amount of 20 million CFAF earmarked for financing the first phase of the project's preliminary survey.

The school became operational from August 1984 and the following African Railway undertakings have direct access to the school. All are members of African Union Railways (U.A.R.)

- Abidjan-Niger state Railways
- Benin - Niger joint organization of Railwaus and Transports
- Cameroon National Railway Company
- Congo Ocean Railway (A.T.C)
- Ethio-Djiboutian Railway Company

3/ Annual report, UAR 1982 prospects of Union of African Railways.

- Madagascar National Railway system
- Mali State Railway Company
- Senegalese State Railway Company
- Togolese Railway System
- Trans-Gabonese Railway Organization
- Zairian National Railway Company

The shcool is one of the UAR subregional Railway Training Centre and total estimated cost of the project is $26.25 million out of which local financing received (Congo) was $1.71 million and external financing secured was $24.54 million from ADB and FAC. At this stage the project is totally financed. 4/

4/ Annual report, UAR 1982, prospects of Union of African Railways.

1. Name of Institution: Ecole Superieure Africaine Des Cadres Du Chemin de Fer ESACC)

2. Year of establishment: April 2, 1979

3. Place (location) : Brazaville (Congo)

4. Duration of courses: 1. Three years course, Technician-Engineer
   2. Four years course, Railways Engineer
   3. Refresher courses, Seminars, Workshop

5. Language used: French

6. Entry requirements: Recruitment is by quotas for member countries. There is an entrance examination given by the shcool. One must pass the entrance examination

7. Starting time and frequency : September every year

8. Tution fees (amount): Contact the school

9. Arrangements for accommodation: Hostels

10. Cost of boarding and lodging: Contact the school

11. Is the course open to foreign trainees? If space available after participants from member countries

12. Courses provided (nature and aim):

- Advanced Mathematics ,
- Subject of primarily scientific and detailed technical subjects ,
- Data processing, business management ,
- Technical and workshop drafting ,
- Electricity, electronics, mechanical engineering ,
- Electricial engineering, thermodynamics, fluid mechanics, chemistry ,
- Introduction of buiness economics and rules and regulations governing transportation ,
- Basic concepts of railway techniques, legislation governing railways, Network operation ,
- The administrative, technical and material means required for realizing transportation programme ,
- Functions and responsibilities involved in technical and commercial operations.

13. Complete address including telexes and telephones: Ecole Superieure Africaine Des Cadres du Chemin de Fer (ESACC) Brazzaville People's Republic of Congo

(ii) Kabwe, "Zambia" Railway Training Centre

The existing National Railway Training Centre in Kabwe is intended to be converted into Southern African subregional Railway Training centre. The present training facilities available are mainly on the vocational level. The centre can accommodate 200 trainees with boarding facilities and the centre is sub-divided into three main departments mainly engineering, operation and supervisory training units.

The intended subregional centre premisses will be built on a 20 hectare of land in Kabwe in Zambia (extension project of existing centre). The project will include construction of lecture rooms, workshop, offices, theatre, residence (staff), trainees accommodation, restaurants and cafeteria, library, laboratory, recreation grounds etc.

The cost of the construction will finally depend on the final design. However, at this preliminary stage cost of the construction is estimated to be US$15.0 million.

Contribution

Host country

- Local component,
- Site (free) ,
- Diplomatic immunities and privileges ,

Beneficiaries

- Sharing on equal basis the foreign component of the project cost,
- 50% annual budget share
- 50% on percentage basis relating to the number of the network personnel training annually.

The centre will cater for the management training needs of the following networks- Botswana Railways, Malawi Railwys, Mozambique Railways, Swaziland Railways, Tanzania Railways, Uganda Railways, Zambia Railways, Zimbabwe Railways.

External financing so far received was $0.35 million from UNDP. Local financing obtained (Zambia) was $0.05 million. External financing required is $14.6 million.

The existing Training centre at Kabwe provides training to few students of the participating countries. When the whole project will be implemented it will train trainees from all participating countries. the following fields of diciplin are intended to be taught:

(1) first level of management (6-9 months),

(2) middle management from (3-6 months),

(3) Senior management from (2-4 months),

Generally, at level (1) and (2) courses will contain technical and managerial aspects with emphasis on practical training. There will also be some specialized courses in fields like data processing, computer services, tariff making etc.

As far as senior management courses and seminars with a duration of two or four weeks should be designed in fields like negotiations with multinational co-operation and funding agencies, policy issues, relation with subordinate, group guideance etc. 5/

(iii) Zaira "Nigeria" Railway Training School

The school is intended to cater for the training of West African Anglophone countries on Railways management and operations.

The conversion of the centre into a subregional one was done by Nigeria with full financial assistance from the Nigerian government. The total cost of the conversion was $15.0 million.

The centre is operational since August 1984.

Information on courses offered was not available during this preparations and as soon as available will be included.

(iv) Warden Training school for Railway personnel

The Wardan Centre has been the property of the Egyptian Government since 1977. The Union of African Railways made a series of negotiations with the government of Egypt so that the centre be converted into a subregional Railway Training centre for the Northern subregion.

The Egyptian Government has consented that the centre be converted into a North African subregion Railway Training Centre. Union of African Railways is negotiating with the Egyptian Railway Administration of how to organize the centre to be a subregional one and also is seeking financing to enlarge the centre and tailour appropriate courses.

The total cost of the conversion of the school from Nation to subregional centre is $1.0 million. So far no external financing is obtained. Since the National School has adequate infrastructure, the estimated cost of the conversion is only $1.0 million. At present the centre is providing training to the staff of Egyptian Railway Administration and Sudan Railways.

5/ Annual report, UAR 1982, prospects of Union of African Railways.

The centre is intended to serve all North African countries.6/

Information on courses offered was not available during the preparation of this compendium and will be included as soon as available.

(v) Kenya Railways Training Centre

The Organization has undergone several changes of name; starting as Uganda Railways at its inception 1896 when construction started from Mombasa. The sole purpose at that time being to have a communication link with Uganda hinterland. The name was later changed to Kenya Uganda Railway and in the late fifties to East African Railways. After the split of the East African Community the portion of the Railways in Kenya became officially known as the Kenya Railways.

In fact training facilities at the Nairobi Railway Training School was in excess of the demands of Kenya Railway alone. In the past apart from providing training to Uganda and Tanzania trainees who were joint owners, the shcool provided training for Zambia, and in recent years a number of students came from as far as Swaziland and Botswana as well.

From recent survey of the Kenya Railway training facilities it is understood that the Kenya Railways intend to expand the school to cater for higher management training. This will involve remodelling of some of the existing buildings and putting up other new structures.7/

6/Annual report, UAR 1982, prospects of Union of African Railways.

7/Annual report, UAR 1982, prospects of Union of African Railways.

1. Name of Institution: Kenya Railways Corporation

2. Year of establishment: First as Uganda Railways in May, 1968 and later as Kenya Railways, January 1978

3. Place (location): Republic of Kenya

4. Duration of courses: Range from six months course for white color jobs upto five years' for technical courses

5. Language used: English

6. Entry requirements: Minimum of secondary school education

7. Starting time and frequency: January of each year and annually

8. Tution fees (amount): -

9. Arrangements for accommodation: Accommodation by the Railway Training School

10. Cost of boarding and lodging: Shs. 52,800/ per annum

11. Is the course open to foreign trainees? Yes - so far for Tanzania, Swaziland Botswana students

12. Courses provided (nature and aim): To meet manpower requirements of the Kenya Railways

Station Masters, Yard Masters, Station Clerks and Office Workers,
Craft Apprentices, Engineering Apprentices, Locomotive Drivers,
Permananent way Trainees, Surveyors, Draughtsmen, Signal Fitters, Artizans,
Clerk Storekeepers, Account Clerks,
Management Trainee Courses for Graduates,
Line Managers'Courses,
Secretariat Management Courses,
Supervisory Management Courses,

13. Complete address including telexes and telephones: Box 30121, Nairobi Telephone:21211 Telex: 22254, Nairobi.

5. Maritime transport (shipping and ports)

Maritime transport plays a major and significant role in international trade:

About 90 per cent of Africa's foreign trade is carried by sea. At the same time African fleet representation is one per cent of tankers, 0.2 per cent of bulk carriers and 2.3 per cent of general cargo ships. The trend is that of declining from time to time. The reason for this is partially due to low operational and management capacities of the African fleet.8a/

Practically all the international trade of African countries passes through their ports. Cargo handling productivity for general cargo is 5 to 12 tonnes per gang per hour, compared with 15 to 25 tonnes per gang per hour in the development world and daily ship output of between 350 and 500 tonnes in developing countries' ports, compared with 1,000 tonnes or more in ports of developed countries. Because of inefficiency in cargo handling, ships have to stay in port longer than they should, waiting for their cargoes to be loaded and discharged. This imposes an enormous financial burden in the shipowners - a burden passed quickly on to importers and exporters through higher freight rates.8b/

To efficiently run seaport and shipping organization requires skilled, trained and experienced managers and supervisors. This is particularly so during a period of rapid technological change in maritime transport as a whole.

Many developing African countries took over management of their ports and shipping organizations from colonial administrations and replaced expatriate managers with indigenous, untrained staff.

In order that management of African ports and shipping organization be efficient and effective tools of development of shipping and port industry in Africa, training of shipping and port staff of all level should be given high priority. Training of indigenous could be carried out both abroad and in Africa. To develop maritime transport institutions in Africa, African Governments are putting together their efforts and resources. There are few maritime traning institutions established and operated jointly on subregional basis. Some of them are mentioned below. The effort of strengthening of these institutions must continue.

8, a,b/ Review of Maritime Transport 1984, UNCTAD

(i) EGYPT

Alexandria Maritime Academy

1. Name of Institution: Alexandria Maritime Transort Academy

2. Year of establishment: October , 1972

3. Place (location): Alexandria

4. Duration of courses: See course contents

5. Language used: English mainly, also Arabic is used from time to time

6. Entry requirements : For cadet courses: General secondary school certificate with passing grades in mathematics, physics and English language. For higher certificate of competency: Cadet course and required seatime, good health requirements is essential for all

7. Starting time and frequency: Depends on the course, See course content

8. Tuition fees (amount) : Changes from time to time, contact the Academy

9. Arrangements for accommodation: Available and is compulsory

10. Cost of boarding and lodging: Contact the Academy

11. Is the course open to foreign trainees? Yes

12. Courses provided (nature and aim): See course content in the following pages

13. Complete address including telexes and telephones:

Alexandria Maritime Transport Academy

P.O.Box 1029 Alex A.R.E

Telex 4160 ACAD UN

Courses offered

BASIC STUDIES AND B.Sc. PROGRAMMES

The Arab Maritime Transport Academy grants the following certificate and degrees.

1. Certificate of Completion in Nautical Basic Studies.
2. Certificate of Completion in Marine Engineering Basic Studies.
3. Certificate of Completion in Radio and Electronics Basic Studies.
4. Diploma in Radio and Radar
5. B.Sc. in Maritime Studies.

   (a) Nautical Technology option.
   (b) Economics and Management option.

6. B.Sc. in Marine Enginerring
7. B.Sc. in Marine Electronics

In addition to the above degrees and certificate, graduates of the Academy also obtain the Certificate of Competency. The issuance of these certificates is regulated by the Egyptian Ministry of Transport.

GRADUATION REQUIREMENTS

Nautical Basic Studies:

"The Academy issues a certificate of completion in Nautical Basic Studies to cadets who successfully complete the following requirements:

(a) Phase one

This phase of the study is four semesters long and consist of all the basic and professional course with one short summer training cruise. the cadet is required to complete 86 credit hours during this phase.

(b) Phase two

Long sea training for a period of 18 months during which the cadet is required to complete 15 credit hours.

(c) Phase three

Comprehensive review of all subjects for one semester in preparation for the professional examination. The cadet is required to complete 21 credit hours during this phase, then take the examination for the Second Mate certificate of competency.

(d) The cadet must achieve a minimum grade point average of 2.00 in each phase in order to graduate."

Marine Engineering Basic Studies:

"The Academy issues a certificate of completion in Marine Engineering Basic Studies to cadets who successfully complete the following requirements.

(a) Phase one:

This phase of the study is four semesters long and consists of the basic and professional courses with one short summer training cruise. the cadet is required to complete 86 credit hours during this phase.

(b) Phase two:

Long sea training for a period of 24 months during which the cadet is required to complete 20 credit hours.

(c) Phase three:

Comprehensive review of all subjects for one semester in preparation for the professional examination. The cadet is required to complete 19 credit hours during this phase, then take the examination for the Marine Engineer certificate of competency.

The cadet must achieve a minimum grade point average of 2.00 in each phase in order to graduate."

Radiio and Electronic Studies:

"The academy issues a certificate of completion in Radio and Electronic Basic Studies to cadets who successfully complete phase one of their studies and Diploma in Radio and Radar to those who successfully complete phases one and two as outlined below:

(a) Phase one - Radio and Electronic Basic Studies:

This phase of the study is four semesters long and consists of all the basic and professional courses with one short summer training cruise. The cadet is required to complete 82 credit hours in order to obtain the certificate of completion in radio and Electronic Basic Studies.

(b) Phase two - Diploma in Radio and Radar:

This phase of the study is two semesters long and consists of courses in the operation and maintenance of radio, radar and electronic navigational equipment. The cadet is required to complete 34 credit hours in order to obtain the Diploma in Radio and radar.

The cadet must achieve a minimum grade point average of 2.00 in each phase in order to graduate."

B.Sc. Degrees:

(A) B.Sc. in Maritime Studies:

"The Academy grants the B.Sc. degree in Maritime Studies with options in Nautical Technology of Economics and Management plus the Second Mate Certificate of Competency to cadet who successfully complete the following requirements.

(a) Phase one:

This phase of study is two years (four semesters) long and it is identical to that of the Nautical Basic Studies.

(b) Phase two:

This is the long sea training and its period is regulated by the legislation of the Egyptian Ministry of Transport. At the present time the sea training period for the second Mate Certificate of Competency is eighteen months and it is identical to that for the Nautical Basic Studies.

(c) Phase three:

This phase of the study is made up of two years of academic work, during which the cadet is required to complete 84 credit hours.

The cadet must achieve a minimum grade point average of 2.00 in each phase in order to graduate."

(B) B.Sc. in Marine Engineering:

"The Academy grants the B.Sc. degree in Marine Engineering plus the Marine Engineer Certificate of Competency to cadets who successfully complete the following requirements.

(a) Phase one:

This phase of the study is two years long and it is identical in content to that for Marine Engineering Basic Studies. The cadet is required to complete 86 credit hours during this phase.

(b) Phase two:

This is the long sea training and its period is regulated by the legislation of the Egyptian Ministry of Transport. At the present time the sea training period for the Marine Engineer Certificate of Competency is one year. The cadet is required to complete 10 credit hours during this phase.

(c) Phase three:

This phase of the study is made up of two and a half years (five semesters) of academic work, during which the cadet is required to complete 98 credit hours during this phase.

The cadet must achieve a minimum grade point average of 2.00 in each phase in order to graduate.

(C) B.Sc. in Marine Electronics Engineering :

"The Academy grants the B.Sc. degree in Marine Electronics and Communications plus the Second Class Radio Officer Certificate and/or the General Certificate to cadets who successfully complete the following requirements:

(a) Phase one :

This phase of the study is two years long and is identical in content to that of the Radio and Electronic Basic Studies. The cadet is required to complete 82 credit hours during this phase.

(b) Phase two :

This phase of the study is made up of two and a half years (five semesters) of academic work, during which the cadet is required to complete 100 credit hours.

(c) The cadet must achieve a minimum grade point average of 2.00 in each phase in order to graduate."

Transfer of Credits :

The Academy accepts transfer students from other accredited institutions as long as they meet the following conditions:

1. They must satisfy all the requirements for admission to the Academy.

2. They must have a cumulative grade point average of at least 2.00 or grade of Good.

3. The transfered courses must be similar to those offered by the Academy.

4. The grade point average in each course to be tranfered must not be less than 2.00 or a grade of Good.

Grades for transfered courses are not computed in the student grade point average, however the credit hours of these courses are counted towards the requirement for graduation."9/

9/ Arab Maritime Transport Academy catalogue 1981

(ii) Ghana

1. Regional Maritime Training Academy

In 1976, at the third session of the Ministerial Conference of West and Central African States on Maritime Transport, it was decided to transform the Nautical College at Accra into a regional academy for Anglophone African countries. Norway and UNDP agreed to finance part of the project.

Like the Abidjan Academy, here also UNDP suggested that this Academy be a Regional Academy to cater for Maritime Training requirements of all Anglophone African countries. The College is being slowly converted into a Regional Academy and some Anglophone African countries are training their trainees there.

The total cost of the project was estimated at $5.0 million. UNDP contributed about $1.8 million in 1978 and made commitment to provide £3.5 million over 5 years period since 1978. NORAD agreed to provide $1.0 million over four years period.10/

10/ Report of Ministerial conference of west and central African States on Maritime Transport 1979.

1. Name of Institution: Regional Maritime Academy (formerly Ghana Nautical College)

2. Year of establishment: 1959 as the Ghana Nautical College: Regionalized on 26 May 1983

3. Place (location) : Nungua, Accra, Republic of Ghana

4. Duration of courses : See attachment 1

5. Language used: English

6. Entry requirements: See following pages

7. Starting time and frequency: September of each year and ends in July. There are different starting times for courses due to different durations and the capacity of dormitories and classrooms

8. Tuition fees (amount): Varies according to different courses (about) $1,400 per term

9. Arrangements for accommodation: There is a dormitory of capacity of 144 students at one time. There is a Communal Block for cooking, dining and recreation

10. Cost of boarding and lodging: Including in the tuition fees

11. Is the course open to foreign trainees: First priority is given to students coming from participating countries, then second priority is given to foreign students

12. Courses provided (nature and aim): All courses have the general aim to induce and cultivate scientific, professional, psychomotor and effective abilities in the learner's personality and to prepare him in the proper way that will enable him to fulfil the duties and bear the responsibilities of his job (according to the name of course). Each course comprises subjects relevant to its nature. For detail see following pages.

13. Complete address including telexes and telephones:
Regional Maritime Academy , Nungua, Accra

Republic of Ghana,

P.O.Box 1115,

Accra

Tel 2798 - TEMA

1. NAUTICAL STUDIES

1.1 Basic studies
- Duration : 3 semesters in 1½ years
- Frequency: Once every 1½ years
- Admission: Holder G.C.E "A" level (either mathematics or physics) and G.C.E "O" level pass or credit English language

1.2 2nd hand home trade /fishing (H.T/F.)
- Duration : 3 semesters in one year
- Frenquency: Once every year
- Admission : Holder G.C.E. "O" level or W.A.S.C. pass in four subjects, two of which are mathematics and English or an equivalent academic level assessed by the Academy, 3 years at sea compulsory

1.3 Skipper
- Duration : 1 semester
- Frequency: Ad hoc
- Admission: Holder second hand certificate of competency or equivalent qualification. 24 months as watchkeeping officer in fishing vessels

1.4 Tug mates
- Duration : 1 semester
- Frequency: Ad hoc
- Admission: Holder G.C.E. "O" level with 4 subject passers, 18 months at sea in tugs or other similar boats

1.5 Up-grading courses (2nd, 1st mates & mates F.G)
- Duration : 1 semester for each
- Frequency: Ad hoc
- (not yet implemented)

2. ENGINEERING STUDIES

2.1 Basic studies
- Duration : 4 semesters in 2 years
- Frequency: Once every 2 years
- Admission: At least two subjects at G.C.E. "A" level either mathematics or physics and G.C.E. "O" level pass or credit in English language

2.2 2nd. class H.T./F.
- Duration : 4 semesters in 1½ years
- Frequency: Once every 1½ years
- Admission: G.C.E. "O" level or W.A.S.C. in four subjects of which 3 must be mathematics, physics, and English language or technical education up to M.E.T. 1 in Mechanical engineering or refrigerations technicians (R.T.). 24 months sea service in engin room

2.3 1st class Eng. H.t./F/
- Duration : 3 semesters in one year
- Frequency: Once every one year
- Admission: Holder of valid second class engineer certificate of competency Home Trade/Fishing combined. At least 2 years sea service after 2nd. class certificate

2.4 2nd Class Electrician
- Duration : 4 semesters in 1½ years
- Frequency: Once every 1½ years
- Admission: Holder G.C.E. "O" level or W.A.S.C. in four subjects of which 3 must be mathematics, physics and English or technical education, electrical technician certificate (E.T.2). 24 months engine room experience or electrical experience.

2.5 1st Class Electrician
- Duration : 3 semesters in 1½ years
- Frenquency: Once every 1½ years (not yet implemented=
- Admission: Possess valid second class ships electrician certificate with 12 months sea service as Ass. Electrician

2.6 Up-grading courses (3rd, 2nd. M.Eng. & Elec. Eng.)
- Duration : 1 semester for each
- Frequency: Ad hoc
- (not yet implemented)

3. RADIO AND MARINE ELECTRONICS STUDIES

3.1 Marine Radio General Certificate (M.R.G.C.)
- Duration : Four semesters in 2 years
- Frequency: Once every 2 years
- Admission: "A" level in physics and mathematics or City and Guilds Part II Telecommunications Technician

3.2 Diploma in radio and marine electronics
- Duration : Two semesters in one year
- Frequency: Once every year

4. MARITIME STUDIES FOR SHORE BASED PERSONNEL
(not yet implemented).

(iii) COTE D'IVOIRE

Academic Regional des Sciences et Techniques de la Mer

In 1976 the Ministerial Conference of West and Central African States on Maritime Transport agreed to establish the Academy at Abidjan, Ivory Coast for the 15 Franco-phone members of the Ministerial Conference. UNDP, in its programme of Regionalization of Training Centres suggested that the Abidjan Academy be a Regional Training Centre for the whole of Africa and agreed to finance part of the Regionalization Project.

The Academy, when fully operational, will train trainees from Francophone African countries in the fields of deck, engine and radio officers and shore based cadres of shipping and port indusry. It intends to give also short courses in fishery and other related areas.

The total cost of the project $58.0 million out of which the host country contributed $7.5 million and UNDP and EDF $11.5 million. Additional external financing required is $39.0 million. The project is on-going at present and it is hoped that the Academy will be in full services in the near future. The Academy is providing training in some fields at present though the whole project not yet completed. 11/

11/ Report of Ministerial Conference of west central African states on Maritime Transport 1979.

1. Name of Institutions: Academie Regionale des Sciences et Techniques de la mer

2. Year of establishment: The project started in 1976

3. Place (location): Abidjan, Ivory Coast

4. Duration of courses: Superior Maritime studies, 4 years
technical Maritime studies, 3 years
different trainings, 1 year

5. Languages used: French

6. Entry requirements: Superior Maritime studies: level of French Baccalaureat, Technical Maritime studies: level of second of the French secondary cyclus

7. Starting time and frequency: October, yearly

8. Tuition fees (amount): Superior Maritime studies: First years 1,850,000 Francs CFA including school ship: secnd years: 1.850.000 Francs CFA including school ship: Third and fourth years: 1,250,000 Francs CFA; Technical Maritime studies and different training: 1 ,800,000 Francs CFA yearly

9. Arrangements for accommodation: Students for technical Maritime studies and different trainings are accommodated in the school, Students for superior Maritime studies are accommodated at the University Campus. From school year 1987/1988 on all students will be accommodated in the academy

10. Cost of boarding and lodging: For technical Maritime studies and different training the lodging and boarding is included in the tuition fees, for Superior Maritime studies they have to pay themselves lodging and boarding at the University campus about 40.000 Francs CFA monthly

11. Is the course open to foreign trainees: Course is open for foreign trainees

12. Courses provided (nature and aim): Superior Maritime studies: Masters, Chief Engineer, Harbour Masters; Technical Maritime studies; Deck Officer, Engineer Officer, Masters and Chief Engineer coastal shipping masters and officers for fishery, Harbour Petty Officers: Training Centre: Training for able seamen, deck and engineer, training for master, officers and engineer for near coastal voyages; In a near future a school for sedentary personnel specialized in Maritime Transport will be available

13. Complete address including telexes and telephones:

Academie des Sciences et Techniques de la Mer

B.P. V 158

Abidjan

Republic of Ivory Coast

Tel. 37.18.23

37.18.27

(iv) Kenya

Bandari College, Mombassa

The facilities of Bandari College, Mombassa are available to serve the training needs of member countries of Port Management Association of Eastern and Southern Africa (PMAESA) as well as other Port Authorities in Africa. Courses, Workshops and Seminars run by international Agencies are also conducted with prior arrangement with the college.

The college provides ccurses in maritime studies, management and operations, improvement of port performances, management in port operations and administration, harmonization of port statistics, the port and its users, port operations for supervisors, management of container terminal operations, general cargo operations in Free port section.

Besides the college has the following facilities for training purposes:

- Model Sea Terminal
- Engineering workshop
- Auditorium (640 sq-meters-1000 persons capacity
- Conference Hall and Committee rooms
- Library
- Lecture rooms
- Lecturers' wing (10 flats)
- Students' wing (60 rooms)
- Catering = dining hall of (640 sq. meters 400 persons capacity).12/

12/ Bandari College Mombasa information bulletin 1986.

1. Name of Institution: BANDARI COLLEGE

2. Year of establishment: 1980

3. Place (location): MOMBASA, KENYA

4. Duration of courses: From one week to 12 months

5. Language used: ENGLISH

6. Entry requirements: LITERACY IN ENGLISH LANGUAGE

7. Starting time and frequency: THROUGHOUT THE YEAR

8. Tuition fees (amount): KSHS. 300 PER DAY

9. Arrangements for accommodation: HOSTEL ACCOMMODATION AVAILABLE FOR 60 STUDENTS

10. Cost of boarding and lodging: KSHS. 140 PER DAY BOARDING ONLY

11. Is the course open to foreign trainees? YES

12. Course provided (nature and aim) See following pages

13. Complete address including telexes and telephones: KENYA PORTS AUTHORITY BANDARI COLLEGE, P.O.BOX 95009, MOMBASA, TEL: 312211 - 21211 TELEX 21243 'BANDARI' GRAMS 'KENPORTS'
GRAMS 'KENPORTS'

Senior and middle courses

CONTENT:

1. Diploma in Maritime studies.

2. Management and operations course for middle and junior management staff.

3. Improving Port Performance.

4. Management in Port Operations and Administration.

5. Harmonisation of Port Statistics and Performance Indicators.

6. Port and its users.

7. Port Operation course for supervisors.

8. Management of Container Terminal operations.

9. General Cargo Operations in a Port Section.

Diploma in Maritime Studies

COURSE OBJECTIVES: - To help improve the efficiency of the port overall performance and particularly the service rendered to transit traffic.

DURATION: - Nine weeks

COURSE CONTENT:

1. Maritime economics
2. Basic economics
3. Marine Insurance
4. Investment appraisal
5. Port policy
6. Hinderland transport
7. Maritime law
8. Port planning
9. Management Planning and control
10. Port administration and Operation

LEVEL OF PARTICIPANTS: - Particiants should be selected from senior managers in administration management, operational and technical posts with ample experience in shipping industry.

MANAGEMENT AND OPERATIONS COURSE

MIDDLE & JUNIOR MANAGEMENT STAFF

COURSE OBJECTIVE: - To provide a broad insight into the general aspects of the functioning of a port with emphasis on port management and cargo handling.

DURATION: - Two weeks

COURSE CONTENTS:

1. Technology developments
2. Port planning
3. Cargo handling
4. Port Management
5. Administration

LEVEL OF PARTICIPANTS: - Middle and Junior management staff.

IMPROVING PORT PERFORMANCE

COURSE OBJECTIVE: - To provide participants with knowledge and management skills need to improve general cargo performance at a port.

DURATION: - Four weeks

COURSE CONTENTS:

1. Effect of cargo handling costs in port on Maritime trade
2. Measurement of port performance
3. Ship operation
4. Quay transfer operation
5. Storage
6. Operation
7. Operation planning
8. Receipt and delivery operation
9. Berth management

LEVEL OF PARTICIPANTS: - Managers of ports who are members of PMAESA, senior officials dealing with port operations.

MANAGEMENT IN PORT OPERATIONS AND ADMINISTRATION COURSE

COURSE OBJECTIVES: - To provide a broad insight into general aspects of port operations with emphasis on managment procedures and information systems in a modern port in relation to Mombasa port.

DURATION: - Four weeks

COURSE CONTENTS: -

1. Port productivity
2. Shipping & economics
3. Method study & work measurement
4. Management
5. Information systems
6. Investment appraisal
7. Legal liabilities

LEVEL OF PARTICIPANTS: - Middle and senior management officers.

HARMONISATION OF PORT STATISTICS AND PERFORMANCE INDICATORS

COURSE OBJECTIVE: - To acquaint participants with the skills necessary for monitoring port performance.

DURATION: - Four weeks

COURSE CONTENT:

1. Introduction to the manual
2. Time sheet
3. Berth throughput & port traffic
4. Container statistics matrix
5. Presentation of performance indicators & flowcharts
6. Time sheet - exercises
7. Berth throughput & port traffic exercises
8. Berth occupancy exercises
9. Container traffic & performance report exercises
10. Performance indicators exercise

LEVEL OF PARTICIPANTS: - Port operators involved in cargo operations such as Junior Managers, zone clerks, Supervisors etc.

TRANSPORT AND ITS USERS

COURSE OBJECTIVE:

- i) To broaden the scope of participants on the working relationship between port Operators & Organisations & companies operating in Port.

- ii) To acquaint participants with the effects of their own actions on the port as a whole.

DURATION:

- Two weeks

COURSE CONTENT:

1. Port administration
2. Role and responsibility of KPA and KCHS Ltd.
3. The Port and National development
4. Economic importance
5. Political importance

LEVEL OF PARTICIPANTS:

- Supervisors and Senior Clerks from all departments of KPA and KCHS, Ships' agents and other related organizations.

PORT OPERATIONS FOR SUPERVISORS

COURSE OBJECTIVES: - To impart to the supervisors the knowledge required in cargo discharge from vessels, transfer operation, stacking and tallying of cargo.

DURATION: - Four weeks

COURSE CONTENT: -

1. Introduction
2. Planning Ship working
3. Determining Handling gear
4. Planning and marking transit storage area
5. Export acceptance
6. Determining ETF of a (ship) vessel
7. Preparting working the ship
8. Completion of ship working documents
9. Handling of special cargo
10. The quay and shed operation
11. Import delivery
12. Accidents to Personnel, cargo and equipment
13. Disciplinary procedure

LEVEL OF PARTICIPANTS: - Cargo operators in supervisory level and potential supervisors.

MANAGEMENT OF CONTAINER TERMINAL OPERATIONS

COURSE OBJECTIVE: - To impart to the course participants the knowledge required in containerisation system and management of container terminal.

DURATION: - Three weeks

COURSE CONTENTS:

1. Introduction
2. Basic principles
3. Planning
4. Ship operations
5. Systems operations
6. Straddle carrier operations game
7. CFS operations
8. Control of container movement
9. Delivery
10. Safety
11. Discipline
12. Transtainer operations

LEVEL OF PARTICIPANTS: - Junior and middle managers engaged in container operations.

GENERAL CARGO OPERATIONS IN IMPORT SECTION

COURSE OBJECTIVE: - To acquaint the participants with the skills and knowledge required for general cargo operations.

DURATION: - Four weeks

COURSE CONTENT:

1. Planning and execution of ship and quay operation
2. Planning and use of transit storage area
3. Acceptance and delivery

LEVEL OF PARTICIPANTS: - Cargo operators at the level of Junior and middle manager.

(v) Madagascar

Ecole Nationale D'Enseignement Maritime (E.N.E.M)

This school, in Mahajanga, was established in August 1962. It's main fields of training are Mates for fishing boats, fishing boats skippers, coastal vessels Mate, 3rd. and 2nd. grade engin officers.

Trainees from Seychelles, Mauritius, Comoros, Congo and also from Madagascar have been trained so far. The school welcomes participants from other African countries. Course contents are mentioned in the following pages.

1. Name of Institution: Ecole National D'Enseignement Maritime (E.N.E.M.)
2. Year of establishment: August 1962
3. Place (location): Mahajanga
4. Duration of courses: Two to 4 years without practical training; practical training from 36 months to 4 years, See under courses provided
5. Language used: French
6. Entry requirements: Competition examination
7. Starting time and frequency: October - frequency depending on demand within the profession
8. Tuition fees (amount): MGF 20,000/Month
9. Arrangements for accommodation: 70 places in dormitory and cubicles
10. Cost of boarding and lodging: MGF 20,000/Month
11. Is the course open to foreign trainees: Yes
12. Courses provided (nature and aim): Sea-going officers - overall training in the shipping profession

    Coasting trade officer (3 yrs) Coasting trade Master (1yr)

    Engine officer grade 2 (3 years)

    Engine officer grade 3 (2 years)

    Fishing officer (2 years) fishing master (1 year)

    From 1987 onwards, training in long distance shipping (long distance Master - Engine officer, grade 1 - Fishing Master)

    from 1990 onwards - Training in administration and commercial shipping

13. Complete address including telexes and telephones : Boulevard Poincare - BP 354 - 401 Mahajanga - Madagascar Tel. 27-69

(vi) Nigeria

Nautical College of Nigeria

The Nautical College of Nigeria was basically established to meet the Maritime training requirement of Nigeria itself. However, many African Anglophone countries have been sending their trainees to the College in the past years. Knowing this, the College administration made the door of the College open for those Governments wishing to train their trainees in Nigeria.

1. Name of Institutions: Nautical College of Nigeria

2. Year of establishment: 1979

3. Place (location): Oron, Cross River State, Nigeria

4. Duration of courses: 4½ years

5. Language used: English

6. Entry requirements: 5 Credits WASC/5 Passes GCE including English Lang. Maths. Physics

7. Starting time and frequency: September each year

8. Tuition fees (amount) : Nigerian - Nil; Foreign Cadet: N405.00/year

9. Arrangements for accommodation: On-Campus Hostel Accommodation

10. Cost of boarding and lodging: C.N 1305.00/year. (N1215.00 + N90.00

11. Is the course open to foreign trainees? Yes

12. Courses provided (nature and aim): Nautical Studies, Engineering, Gen. studies

Nautical studies	Marine Engineering	General Studies
Celestial & Coastal Nav.	Marine Engineering knowledge	English Language
Radar Technology	Thermodynamics	Mathematics
Marine Transportation	Fluid Mechanics	Chemistry
Compass Work	Theory of Machines	Physics
Chart Work	Electrotechnology	Spherical Trig.
Cargo Handling	Electronics	Econ. Geography
Maritime law	Control Engineering	
Ship Stability	Engineering Drawing	
Meteorology	Engineering Safety	
Seamanship	Naval Architecture &	
Fire Fighting	Ship Construction	
Personnel Management	Strength of Materials	
Personal Survival	Seamanship	
Naval Science	Fire Fighting	
	Personnel Management	
	Personal Survival	
	Naval Science	

13. Complete address including telexes and telephones:

Nautical College of Nigeria, P M B 1089, Oron, Cross River State, Nigeria

(vii) Tanzania

Bandari College, Dar-es-Salaam

The College was originally intended to cater for port training requirements of Tanzania Harbours Authority, related shipping and port industries in Tanzania and also as a subregional training centre for Front Line Southern African countries both coastal and land-locked.

Because of some financial constrance on the port of the Tanzanian Harbours Authority, it became difficult to acquire all the required equipment and materials and thus the objectives of making the centre into a sub-regional one was not realized so far. However, in the past, apart from what it met the port Maritime requirements of Tanzania itself, it conducted some courses in port fields for some Southern African countries of Angola, Mozambique, Namibia, Seychelles etc.

Norway has indicated its readiness to provide the necessary equipment to make the centre fully operational. It is hoped that in the next few years the College will fulfill its objectives

1. Name of Institution: Bandari College, Dar-es-Salaam

2. Year of establishment: 1980

3. Place (location): Dar-es-Salaam

4. Duration of courses: Two to 3 years long courses, 3 to 6 months short courses

5. Languages used: English

6. Entry requirements: 'O' level school leaving certificate for long courses and work experience for short courses

7. Starting time and frequency: September each year for long courses

8. Tuition fees (amount): Contact the College

9. Arrangements for accommodation: Hostels

10. Cost of boarding and lodging: Contact the College

11. Is the Course open to foreign trainees: Yes

12. Courses provided (nature and aim):

A. Maritime studies
   (i) Marine engineering, marine deck training and shipping,
   (ii) Marine deck costing 2nd. mate from sailors up to Tugmasters,
   (iii) Marine engineering from lowest level of engine room staff and marine craft builders and maintenance personnel up to a level equivalent to Senior Engine Room Assistant. Part B second class foreign going certificate,
   (iv) Stevesdoring,
   (v) Shipping;

B. Technical studies
   (i) Mechanical equipment operations,
   (ii) Plant maintenance and other operating equipment maintenance;

C. Building trades
   (i) Electrical,
   (ii) Civil,
   (iii) Mechanical;

D. Safety
   (i) Industrial hazards and safety,
   (ii) Fire fighting (3 months),
   (iii) Fire prevention techniques, fire station management, fire equipment maintenance;

E. Management studies

(i) Clerical and supervisory.

13. Complete address including telexex and telephones:
Bandari College, Dar-es-Salaam
C/O Tanzania Harbours Authority
P.O.Box 9184
Dar-es-Salaam
Tanzania

Cable: Portreeve, Telex 41346

(viii)Mano River Union Marine Training Institute

The Institute was established in March 1982 by members of Mano River Union (MRU) of Liberia and Sierra Leone. At present the centre is owned by Liberia, Sierra Leone and Guinea which joined the Union later.

The objective of the centre is to train seafarers from the member countries of the Union.

The Federal Republic of Germany and UNDP have assisted the centre with money and training equipment. The total cost of the project was $2.25 million. The project is on-going and at the same time some training programmes are conducted for the three signatories.

1. Name of Institution: Mano River Union Marine Training Institute (UMTI)

2. Year of establishment: 1978

3. Place (location): Marshal City, Liberia

4. Duration of courses: Six months

5. Language used: English/French

6. Entry requirements: Junior high school certificate

7. Starting time and freqency: September

8. Tuition fees (amount): Contact the school

9. Arrangements for accommodation: Hostel

10. Cost of boarding and lodging: Contract the school

11. Is the course open to foreign trainees: Yes, if space available after the admittance of trainees from member countries

12. Courses provided (nature and aim):

The curriculum planned at the institute is intended to prepare student for future sea life as able seamen and engine room boys as greasers, cleaners etc.The curriculum is in conformity with the standards recommended in 1975 by IMO and ILO. It covers the following fields:

- General courses related to the seafaring life;
- Courses on the duties to be fulfilled,
- Seamanship courses;
- Courses on safety and survival at sea;
- Courses on fire prevention and fire fighting;
- swimming courses;
- Courses on first aid.

13. Complete address including telexes and telephones:

Mano River Union Marine Training Institute
Marshal City, Liberia
C/O Secretary General MRU
P.M. Bag 133
Freetown
Sierra Leone

(ix) Regional Arab Institute for Ports and Shipping, Tunis

The Training Centre, which is under the general supervision and control of the Northern African Port Management Association is in the process of being set up. UNDP projet RAF/82/025 is financing the project. Few activities are taking place at present. When the centre becomes adequately equipped to provide training on Port and Shipping, member countries of the Association, namely Morocco, Algeria, Tunisia, Libya, Sudan and Egypt will benefit from it.

For further contacts use the following address:
Institute Arabe Technique pour les
Ports et les Transports Maritimes
10, Avenue de la Republique - Tunis
Tunisia

c. Air Transport

The survey of Manpower Training Requirement made by ICAO in 1978 shows that African future manpower requirement is 23,783 in various fields of Air Transport Industry. One can imagin how expensive it would be to train all 23,783 African Airlines and Civil Aviation staff outside Africa.

To partially meet the training requirement of African Airlines and Civil Aviation Organizations, the African Civil Aviation Commission (AFCAC) suggested to establish multinational training centres. The OAU endorsed the AFCAC initiative. At present such for multinational centres, two for pilots and technicians training and two in the fields of civil aviation, exist and are mentioned below.

Also, the Addis Ababa pilot and Aircraft technician training centre, provides training in the field of personnel development and marketing in Air Transport. This facility is being widely used by participants from Africa, Europe and Asian countries.13/

13/ Survey of Manpower Training requirement, ICAO - 1978

(i) Ethiopia

Ethiopian Airlines Corporation runs two types of Training centres, namely pilots and Aviation Maintenance Technicians Training Centre and personnel Development and marketing Training Centres within its premisses. Both the Training Centre are open to English-speaking African countries and other interested sponsors. These centres have been providing training to many African countries and some Middle Eastern countries. The pilot and Aviation Maintenance Technician Training centre has been recommended by AFCAC and OAU for the development as a multinational training centre in Africa for Anglophone countries.

Pilots and Aviation Maintenance Technicians Training centre

The objectives of this centre are to train students to be qualified to start flying as first officers on the line or as commanders in general aviation, to prepare students for the Ethiopian CAA, the FAA Commercial pilots licence with the instrument ratings and the ATPL theory examinations, to prepare students for the Ethiopian CAA, the United States FAA and the United Kingdom CAA (ARB) Aviation Maintenance certificate examinations and such general education to develop the minds and personalities of students by means of selected disciplines which cultivate keen observation, clear thinking and adjustment to the demands of the aviation industry.

1. Name of Institution: Pilots and Aviation Maintenance Technicians Training Centre

2. Year of establishment: 1960 for the pilot school and 1967 for the Tech. School

3. Place (location): Addis Ababa

4. Duration of courses: 24 to 27 months excluding on the job training

5. Language used: English

6. Entry requirements: High school graduate with Ethioian School Leaving Certificate or possess "O" level matriculation with good pass in English Mathematics and physics

7. Starting time and frequency: For pilots twice a year for technicians once a year

8. Tution fees (amount): Contact the centre

9. Arrangements for accommodation: Hostels

10. Cost of boarding and lodging: Contact the centre

11. Is the course open to foreign trainees? Yes

12. Courses provided (nature and aim): See below

I. Pilot School

Flight and ground Training

Syllabus - Phase I

- link trainer exercises
- Fundamentals of flight
- Meteorology
- Aviation regulations
- Basic flight instruments
- Communications, radio telephone
- Basic aerodynamics
- Aircraft general-Primary trainer
- Aviation English

Phase II

- Flight training, pre-solo
- Flight training,
- Link trainer exercise Naigation, Meteorology Engine, basic aricraft Aerodynamics, Civil Air regulations communications

Phase III

- Flight training
- Link trainer exercises
- Instrument Navigation
- Advanced meteorology
- Communications
- Theory of instrument flying
- Civil air regulation
- Twin (light)

Phase IV

- Airlines Transport Pilot license ground course

Recurrent and transition Training

Conducted on DC-3 Boeing 727, 707, 720 equipment.

Simulator training

Simulator training on Boeing 707/720 full motion simulator with computer generated imagery visual system

Aviation Maintenance Technical School

Airframe and powerplant (A & P) Technicians course

- Maintenance aircraft on the flightline and in the hangar
- Overhaul airframe and powerplant components
- Overhaul engine

Avionics Technicians course

- Maintains avionics system in the flight line and in the hangar
- Overhaul avionics components in the radio, electrical and instrument (REI) shops

Structural Repair Technician's course

- Trainers who are required to perform structural repair work on all types of aircraft on the flight line, in the hangar and in the shop.

Personnel Development and Marketing Training Centre

The Department of Personnel Development and Marketing Training is committed to the provision of training programme on a scheduled basis in the area of general management, marketing, commercial, in flight services and catering.

The commercial and cabin crew training courses are prepared in accordance with the African Airlines Association (AFRAA) commercial training syllabus and because of this many African Airlines Send their trainees to this centre for training.

1. Name of Institution: Personnel Development and Marketing Training Centre

2. Year of establishment: 1980

3. Place (location): Addis Ababa

4. Duration of courses: From 5 days to 10 weeks

5. Language used: English

6. Entry requirements: Work experience in the field of training

7. Starting time and frequency: Several courses and seminars held in a year

8. Tuition fees (amount): Contact the centre

9. Arrangements for accommodation: Hotel accomodation by PAL

10. Cost of boarding and lodging: Contact the centre

11. Is the course open to foreign trainees? Yes (Commercial and cabin crew)

12. Courses provided (nature and aim):

Management
- Statistics
- Systems analysis
- Budgeting and cost control
- Business language
- Communications
- Decision making
- Executive Development programme
- Financial Management
- Techniques and counselling
- Leadership skill
- Purchasing and materials management
- Planning and conducting meetings
- Report writing
- Secretarial Refresher
- Supervisory training
- Training the trainers
- Work planning and methods study

Commercial Training
- Basic reservations
- Advance reservations
- Basic Ticketing
- Intermediate Ticketing
- Advanced Ticketing
- Basic Stations Handling
- Passenger Handling
- Basic Ground Hostess training
- Advanced ground hostess training
- Traffic course
- Basic Freight handling
- Advanced Freight Handling
- Telephone selling
- Salesmanship and customer Awareness

Basic Crew Training

- Basic cabin crew
- Basic Flight Attendants

- Salesmanship for sales Representatives
- Group behaviour
- Controlling marketing effectiveness

General Marketing

- Airline marketing

13. Complete address including telexes and telephones: Director of Training
Ethiopian Airlines, P.O.Box 1755, Telex 21012 cable ETHAIR SITA ADDTVET

(ii) Gabon

The multinational civil aviation training centre at Mvengue (Gabon) started work on 1 October 1985.

This institution, which is the outcome of the will of several states including Cameroun, Central African Republic, Comoros, Congo, Gabon, Mali, Niger, Rwanda, Sao-Tome and Principe, Senegal. Chad, Togo and Zaire to co-operate, is designed to train highly skilled pilots and other technical navigation personnel, as well as technicians specialists in the various areas of air transport.

1. Name of Institution: Centre Multinational de Formation en Aviation Civile de Mvengue

2. Year of establishment: 1978 (26 October)

3. Place (location): Franceville, Mvengue

4. Duration of courses: 2 years for pilots training and 2 years 4 months for training of aircraft maintenance technicians

5. Languages used: French

6. Entry requirements: -

7. Starting time and frequency: End of October 1985 on a 6 months basis for pilots and 14 months for technicians

8. Tuition fees (amount): CFAF 32,500,000 for pilots and CFAF 14,000,000 for aircraft maintenance technicians

9. Arrangements for accommodation: Boarding facilities

10. Cost of boarding and lodging: Included in school fees

11. Is the course open to foreign trainees? Yes

12. Courses provided (nature and aim):

I. Pilots training programmme

- General subjects (English , mathematics)
- Technical subjects relating to aeronautics such as navigation, radio-navigation, air transport regulation, meteorology etc.

- Practical training at the controls of single motor, bimotor and simulator aircraft

II. Training programme for aircraft maintenance technicians

- General and technical subjects (English, mathematics, physics, Industrial drawing, Technical English)
- Theoretical courses in specialized fields
- Practicals in workshops

13. Complete address including telexes and telephones: Will be comunicated later; in the meantime address corrrespondence to; Ministere de l'Aviation Civile et Commercial, B.P. 546, Libreville, Gabon

(iii) Kenya

Kenya Institute for Meteorological Training and Research

The participating countries are Ethiopia, Botswana, Zambia, Malawi, Lesotho and Kenya. ICAO and UNDP are supporting the Institute by meeting some of its expenses. Participating countries share certain portion of the budget of the centre. The centre is open to non-participating countries in Africa if spaces are available.

1. Name of Institution: Institute for Meteorological Training and Research

2. Year of establishment: 1971

3. Place (location): Dagoretti Corner, Ngong Road, Nairobi

4. Duration of courses: 10 weeks, 17 weeks, 20 weeks, 6 months, 10 months, 2 years

5. Language used: English

6. Entry requirements: 'O' level/Equivalent, BSc/Diploma in Meteorology

7. Starting time and frequency: January, March, May, June, July, November

8. Tuition fees (amount): Kshs. 1,200.00, 2,000.00, 2,000.00, 4,700.00, 5,700.00* p.a. 16,700.00*, 3,400.00*, 5,800.00,* 8,800.00, *13,600.00*

9. Arrangements for accommodation: Institute Hostel available

10. Cost of boarding and lodging: Kshs. 1,500.00 p.a

11. Is the course open to foreign trainees? Yes

12. Courses provided (nature and aim):

a. Opeational Training Course: 20 weeks course for officers with BSc/Dip.in Meteorology intended to provide required skills in operational duties.

b. Meteorological officers Course: a 2 years course designed to provide skills in waether forecasting.

c. Advanced Observers Course: 10 months course to provide weather observers with advanced knowledge in Meteorological and weather observations.

d. Advanced Forecasting Course: 10 weeks course for serving Meteorological officers intended to provide the officers with advanced knowledge in weather forecasting.

e. Specialized Course in Agrometeorology: a 6 months course for meteorologists and meterological officers who wish to specialize in Agriculture Meteorology.

f. Basic Course: a 17 weeks course to train students in meteorological and agrometeorological observations at out-stations and airports.

13. Complete address including telexes and telephones: Institute for Meteorologicgal Training and Research, P.O.Box 30259 Nairobi, Telephone No. 56788

Telex No. 22208

* For non-participating countries. Participating countries: Ethiopia, Botswana, Zambia, Malawi, Mauritius, Seychelles, Somalia, Sudan, Lesotho and Kenya.

(iv) Niger

The school of Meteorology and Civil Aviation of Niamey

The school was established by ASECNA in 1963 and offers basic and specialized training to ASECNA member States in the field of air control, electronics, electricity and meteorology.

1. Name of Institution: The School of Meteorology and Civil Aviation of Niamey

2. Year of establishment: 1963

3. Place (location): Niamey, Niger

4. Duration of courses: 2 years

5. Language used: french

6. Entry requirements: N.A.

7. Starting time and frequency: September every year

8. Tuition fees (amount): Contact the school

9. Arrangements for accommodation: Hostels

10. Cost of boarding and lodging: Contact the school

11. Is the course open to foreign trainees: Yes (AASCNA Members)

12. Courses provided (nature and aim):

    1. Air Control
    2. Electronics
    3. Electricity and Meteorology
    4. Construction engineering

13. Complete address including telexes and telephones:

The school of Meteorology and Civil Aviation of Niamey, Niger.

(v) UGANDA

1. Name of Institution: East African Civil Flying Academy

2. Year of establishment: 1972

3. Place (location): Soroti (UGANDA)

4. Duration of courses: as per attached sheet

5. Language used: English

6. Entry requirements: Higher School Certificate (Physics, Maths, Geography).

7. Starting time and frequency: October Every year

8. Tuition fees (amount): as per attached sheet

9. Arrangements for accommodation: Full Board

10. Cost of boarding and lodging: As per attached sheet

11. Is the course open to foreign trainees? Yes,

12. Courses provided (nature and aim):

13. Complete address including telexes and telephones: East African Flying Academy P.O.Box 333. Soroti Telex: Cable: Civfly

Training of Pilots and Maintenance Engineers:

Pilot Training: Minimum 10 students; Maximum 20 students:

Private Pilots: Licence (C172) - 12 Weeks		Charge US$
Medical Examination		150.00
License Fees		150.00
School Supplies and Accessories		500.00
Complete Theory Course and Examinations		600.00
Dual Flight Training (10 hours)		560.00
Sales Flight Training (45 hours)		2,400.00
Sub-total	US$	4,360.00

Commercial Pilot's Licence (C172) - 30 weeks:

Medical Examination		100.00
Complete Theory course and CAA Examination		4,600.00
Licence Fees		200.00
Flight Training + (C172) 135 hours		5,000.00
Flight Test		350.00
Sub-total	US$	10,350.00

Multi-Enginer/Instrument Rating/Night Rating C310 - 16 Weeks:

50 hours on C310 with Instructor		3,750.00
50 hours Simulator (Frasca Twin)		1,000.00
Flight Test		350,00
School Supplies		150.00
Theory Course		1,000.00
Sub-total	US$	6,250.00

Airline Transport Pilot' Theory Course (8 weeks):

Theory Course and School Supplies		6,000.00
CAA Overseas Examination		1,000.00
Sub-total	US$	7,000.00
TOTAL	US$	27,960.00

Remarks: Accommodation charges included in the above charges.

Aircarft Maintenance Engineering Course:

A and C Licences: Minimum 6 students Maximum 20 students;

- The Course lasts 27 months and costs US$ 20,000 per student.

- Sponsor to provide transport to/from in event of emergency recall or mid-course holidays of three weeks.

- Students must come with monthly allowance of equipment US$30 to buy writing paper pens, pencils etc.

- Text books will be provided.

'X' Licence: Minimum 6 students Maximum 10 students:

- Other details same as for A&C Licence.

CHAPTER III

Multipurpose Training Institutes

Introduction

Though the need is there that Multipurpose Training Institutes be developed in Africa, it did not materialize so far because of financial constraints and lack of co-ordinated efforts.

Believing that the establishment of such Training Institutes would also serve the training objectives of African Governments, ECA has managed to negotiate with the default East African Community to convert East African Management Institute at Arusha, Tanzania into East and Southern African Management Institute (ESAMI) to cover the training requirements of the Eastern/Southern Africa Sub-region. ESAMI provides training in management and operational techniques in the field of all modes of Transport. For detailed information about the centre and the courses it provide in the field of Transport, see the following pages.

ECA, in view of its efforts to develop more Multi-purpose Training Institutes, has identified a project called establishment of a Regional Transport Institute in Africa (MMP-60-002) in its Transport and Communications Decade programme.

The objective of the project is to establish such an Institute to promote development of research in the field planning, economics, management and organizations of transport modes in Africa. It is believed that through it the development of a rational transport system in Africa will be greatly achieved.

The project is estimated to cost US$ 5.20 million including studies and African countries such as Morocco, Sierra Leone and Liberia have offered to host. International organizations, financial institutes and other donors are being contacted to finance the project.

(a). Eastern and Southern African Management Institute (ESAMI)

ESAMI is an inter-governmental institute whose objective is to help improve the performance and management effectiveness of public and private enterprises and institutions in the subregion. Through its Transport and Communications Management Division it organizes Transport training courses, seminars, workshops etc. in all modes of transport. Duration of courses differ from one mode of transport to the other. There are courses designed to last 5 days and also courses that last 6 to 10 weeks.

There are three policies followed by ESAMI of conducting training programmes. They are open training programme, tailor-made training programme, and seminars, conferences and symposia.

Open training programme

Based on a general assessment of the needs of the organizations in the region and the development of new concepts, tools and techniques in the field of management science, the institute organizes short term residential training programmes for practicing managers in transport fields aimed at providing them with skills, knowledge and attitudes needed to improve their personal and organizational performances. The duration of such programmes ranges from one week to 12 weeks.

Tailor-made training programmes

The institute welcomes requests from the organizations it serves to work with managers to design and conduct tailor made training programmes on specific themes or problem areas relevant to the needs of a particular organization. Duration depend on the course programme.

Seminars, conferences and symposia

Also the institute organize conferences, seminars, and symposia for top level policy makers at national, regional, regional and international level on themes of utmost importance in the field of transport management and provides a forum for an exchange of ideas and views among them.

The Institute is also offering consultancy and Research works in the field of transport.

1. Name of Institution: Eastern and Southern African Management Institute (ESAMI

2. Year of establishment: 1980

3. Place (location): Arusha, Tanzania

4. Duration of courses: depends on type of course

5. Language used: English

6. Entry requirements: Middle and senior management working experience

7. Starting time and frequency: Depends on how many courses given each year

8. Tuition fees (amount): Contact ESAMI

9. Arrangements for accommodation: Hotel

10. Cost of boarding and lodging: Contact ESAMI

11. Is the course open to foreign trainees? Yes

12. Courses provided (nature and aim):

Some of the courses offered in transport field are:

- Port operations management
- Packing, warehousing and distribution management techniques (physical distribution management)
- Transport statistical analysis planning and operation
- Economies of transport pricing
- Economics of Inland Water Way Transport

- Procurement and contact negotiation for transport
- Transport project planning evaluation and management
- Advanced transport economics
- Courses on operations, maintenance and management of road transport fleets
- Courses on railway operations and management
- Courses on air transport management

13. Complete address including telexes and telephones:

Eastern and Southern African Management Institute (ESAMI)
P.O.Box 3030
Arusha (Tanzania)
Telegrams: Performance
Telephone: Arusha 2881/5
Telex: 42076 EACOMI

Chapter IV

National Transport Training Centres in Africa

Different types and sizes of National Transport Training Centres are available in Africa to day in quest to meet training requirements in the field of Transport. Some are better organized than the others and few have been converted into Subregional/Regional centres that render high quality training services for African Transport development in general.

Much information was not obtained of National Transport Training centres in Africa when this publication was made. That is why only listing of some of national transport training centres is carried out at this stage. It is believed however, that when African Ministries responsible for Transport receive this publication, they will provide full information on their National Transport Training centres. ECA would like to receive such information as early as possible and once it receives them it will up date the publication by including full information on National Transport Training centres in Africa. Until then, only list of existing centres with the objective of informing African countries what is found and where is provided.

Algeria

(i) Institute superieur

Maritime

Bou ISMAIL

Algeria

It is understood that this Institute admits students from some African countries on scholarship basis for training.

Also students from other African countries are admitted on free-paying basis after national requirements are accommodated.

(ii) Nature of courses offered - Not available.

Burundi

1. Name of Institution: Centre de Formation des Personnels Techniques de l'Aeronautique et de la meteorologie (CFPTAM)

2. Year of establishment: 1967 (12 April)

3. Place (location): Bujumbura International Airport

4. Duration of courses: 1 year for operators and 2 years for controllers

5. Language used: French

6. Entry requirements: Certificat de fin du Cycle inferieur des Humanites

7. Starting time and frequency: According to requirements of the aeronautical and meteorological services

8. Tuition fees (amount): Not been determined

9. Arrangement for accommodation: Nil

10. Cost of boarding and lodging: Nil

11. Is the course open to foreign trainees? Depending on availability of vacancies

12. Courses provided (nature and aimd): See attached sheet

Aeronautics

- Air traffic controller's licence
- Aeronautical radio operations license
- Qualifications of aerodrome controller
- Private pilots certificate (theoretical part)
- Course in general knowledge in aeronautics
- Retraining in the aeronautical services sector

Meteorology

- Meteorologists assistant grade IV licence
- Technical meteorological assistance grade III

Courses in general knowledge

- Mathematics, physics, general meteorology,
- agro-meteorology, hydro-meteorology

13. Complete address including telexes and telephones: Centre de formation Techniques de l'Aeronautique et de la Meteorologie, B.P. 694, Telex.22196 Bujumbura, Burundi

Cape Verde

1. Name of Institution: Centro Formacao Nautica

2. Year of establishment: 1984

3. Place (location): Mindelo - Sao Vincente - Cabo Verde

4. Duration of courses: 3 years

5. Language used: Portuguese

6. Entry requirements: 11 years at school

7. Starting time and frequency: 15/9 yearly

8. Tuition fees (amount) -

9. Arrangements for accommodation: -

10. Cost of boarding and lodging: -

11. Is the course open to foreign trainees? No.

12. Course provided (nature and aim):

- Pilots and master marines
- Engineers and chief engineers
- Radio electronics

13. Complete address including telexes and telephones: Centro Formacao Nautica - C.P. 163, Mindelo, S. Vincente, Telef. 2470, Telex 32

Kenya

1. Name of Institution: Kenya Airways

2. Year of establishment: 1977

3. Place (location): Embakasi - Nairobi

4. Duration of courses: Ranging from 2 days to 1 year

5. Language used: English

6. Entry requirements: "O" levels

7. Starting time and frequency: It would depend on the type of the course

8. Tuition fees (amount): Not available

9. Arrangements for accommodation: Self/Company

10. Cost of boarding and lodging: Kes. 300/per day if accommodated in a hotel on company arrangements

11. Is the course open to foreign trainees? -

12. Courses provided (nature and aim): Aim to improve the skills of the employees with a view to manpower development

13. Complete address including telexes and telephones: Manager Personnel Kenya Airways Limited, P.O.Box 19002, Nairobi, Telephone; 822171 Ext. 251 Telex. (SITA) NBODIKO

Annex.9

Department of Staff Training (MOTC)

1. Name of Institution: Department of Staff Training (MOTC)

2. Year of establishment: 1962

3. Place (location): Commercial Street - Nairobi Industrial Area

4. Duration of courses: Ranging from two weeks to four years

5. Language used: English or Kiswahili

6. Entry requirements: Certificate of Primary Education and K.C.E

7. Starting time and frequency: It would depend on the type of the course

8. Tuition fees (amount): KSHS. 600/-per week

9. Arrangements for accommodation: Foreign traines make their own arrangements

10. Cost of boarding and lodging: KSHS, 300/- per week if accommodated in institution

11. Is the course open to foreign trainees? For few

12. Courses provided (nature and aim): Aim to improve the skill for the personnel already working with the Government Departments

Masonar
Plumbing
Carpenter
Electricity installation
Refrigeration and air conditioning
Power plant
Fitting
Plant-Mechanic - 20 weeks

Auto-Mechanical - 8 weeks
Vehicle driving
Spraying
Welding
Motor vehicle mechanic
Panel Beater
Plant operator
Roads maintenance
Road construction

13. Complete address including telexes and telephones: The Principal Department of Staff Training, Ministry of Transport and Communications, Nairobi

Tel. 541221-6, Telegrams - "TRAINCOMM"

Libya

Academy of Maritime Studies

C/O United Nations Development Programme
P.O.Box 358
Tripoli
Socialist People's Libyan Arab Jamahiriya

Course contents of the Academy are not available. It is believed that the Academy is established to meet the maritime training requirements of Libya. The training centre is open to students of African countries that have bilateral arrangements with Libya.

Libya

Civil Aviation Higher Institute

1. Name of Institution: Civil Aviation Higher Institute

2. Year of establishment : 1982

3. Place (location) : SBEA, (45 KM from Tripoli)

4. Duration of courses : 3 years

5. Languages used : English

6. Entry Requirement: Secondary School Diploma

7. Starting time and frequency: October of each

8. Tuition fee:

9. Arrangement for Accommodation : Full Board

10. Cost of boarding and lodging

11. Is the course open to foreign trainees. Yes

12. Course provided :

A) Telecommunication Engineering
B) Aircraft Maintenance
C) Air traffic control
D) Meteorology
E) Civil Engineering
F) Radar Maintenance
G) Navigation Aids Engineering
H) Aviation Management
I) Other short courses in the field of Aviation.

13. Complete Address including Telex and Telephones:

Telex : 20353 LY, Telephone : 35101/9

Civil Aviation Higher Institute, Tripoli/ Libya.

Malawi

1. Name of Institution: Malawi Railways Training Centre

2. Year of establishment: 1961

3. Place (location): Railways Training Centre

4. Duration of courses: 6 to 18 months

5. Language used: English

6. Entry requirements: J.C

7. Starting time and frequency: When required

8. Tuition fees (amount): Free to staff members

9. Arrangements for accommodation: RTC Hostels

10. Cost of boarding and lodging: Free to local staff members

11. Is the course open to foreign trainees? Yes Locomotives drivers

12. Courses provided (nature and aim):

Station staff-	Foundation,	refresher and	promotional
Locomotive drivers	"	"	"
Platelayer	"	"	"
Pointsmen	"	"	"
Guards	"	"	"
Railway accounts	"	"	"
Linemen	"	"	"
Portclerks	"	"	"
Checkers	"	"	"
Supervisory		"	
Management		"	

13. Complete address including telexes and telephones: Chief Personnel Manager, Malawi Railways Limited, P.O.Box 5144 Limbe, Telephone 640844

Telex: Limbe 4810 Telegrams: MARAILAS, LIMBE

Madagascar

1. Name of Institution : Cours de Formation Professionelle "cours superieures Professionnelle du second degree (Specialization : Track and Buildings

2. Year of establishment: 1968

3. Place (location): Antananarivo

4. Duration of courses: 3 years

5. Language used: French

6. Entry requirements: By professional examination - a minimum of two years work experience, holders of the BEPC Secondary school certificate and less than 30 years

7. Starting time and frequency: October to May

8. Tuition fees (amount): -

9. Arrangements for accommodation: -

10. Cost of boarding and lodging: -

11. Is the course open to foreign trainees? Yes

12. Courses provided (nature and aim): Training of Senior Foremen

(Use other paper if required)

Languages (Malagasy, French, English)
Mathematics
Physics, Chemistry, Electricity, Mechanics
Industrial drawing
Railway technology
Quantity survey - Topography

Construction
Organization - Human relations, management
Physical education
Professional practice

13. Complete address including telexes and telephones : Societe d'Etat Reseau National des Chemins de Fer Malagasy, B.P. 259, Telephone 205-21 Ext. 281, Telex No. 22233 - CFM- TN - MG Antananarivo

Madagascar

1. Name of Institution: Ecole Nationale d'Enseignement de L'Aeronautique et la Meteorologie (ENEAM)

2. Year of establishment: 1975 (12 September)

3. Place (location): Antananarivo - IVATO

4. Duration of courses: Eighteen to thirty months depending on fields of spsecialization

5. Language used: French

6. Entry requirements: Entrans examination open to holders of the "Baccaleureat" or any other recognised equivalent qualification

7. Starting time and frequency: Yearly ,depending on demand. Determined by the Board of Directors of ENEAN

8. Tuition fees (amount):

9. Arrangements for accommodation: Accomodation available for fifty students

10. Cost of boarding and lodging: Determined by the Board of Directors

11. Is the course open to foreign trainees? Based on agreements between governments

12. Courses provided (nature and aim):

- Assistant Meteorolcgical technician (12 to 18 months)
- Air traffic controller (18 months)
- Technical operations officers (18 to 24 months)
- Air safety electronics specialist (24 months)
- Professional aircraft pilot (30 months)

13. Complete address including telexes and telephones: ENEAM, B.P. 62 Avato Airport 105 Antananarivo- Madagascar.

Madagascar

1. Name of Institution: Centre de Formation Professionelle (Driver Training Centre)

2. Year of establishment: 1976

3. Place (location): Antananarivo

4. Duration of courses: 12 months (including 4 months theory and 8 months practicals

5. Language used: French and Malagasy

6. Entry requirements: Competitive entrance examination for candidates above 20 years but less than 26, male, holders of the CEPE

7. Starting time and frequency: In accordance with demand from within the network

8. Tuition fees (amount): Nil

9. Arrangements for accommodation: Accommodation provided during the 8 month practical training but not during the 4 month theoretical training

10. Cost of boarding and lodging: Nil

11. Is the course open to foreign trainees? --

12. Courses provided (nature and aim): Training of drivers

- Safety and movement
- Technology of motor-powered equipment
- Technology of hauling equipment
- Civils and labour regulation
- Technology of electricity

13. Complete address including telexes and telephones: Société d'Etat Reseau National des Chemins de Fer Malagasy, B.P. 259 - Telex No. 22233 - CFM TN - MG, Telephone 205 - 21, Antananarivo, Madagascar

Morocco

(i) Institute superieur des Etudes Maritimes

Route de el Jadide - km7

Casablanca

Morocco

The training centre is to fulfill the training requirement of Morocco itself.

(ii) Nature of courses offered - Not available

Mozambique

1. Name of Institution: Ecola Nautica De Mozambique

2. Year of establishment: 1977

3. Place (location): Maputo, Mozambique

4. Duration of courses: From 6 months to 9 years

5. Language used: Portugese

6. Entry requirements: 11 years of school

7. Starting time and frequency: Every year

8. Tuition fees (amount): -

9. Arrangements for accommodation: Dormitories

10. Cost of boarding and lodging: -

11. Is the course open to foreign trainees? Not at the moment

12. Courses provided (nature and aim):

- Deck officer
- Ships master
- Radio operator
- Radio technician
- Engineering officer
- Chief engineer
- Ships safety courses (personal suvival, fire-fighting
- Electronic navigational aid courses
- Radio telephone operators course
- Various short and upgrading courses for the maritime sector.

13. Complete address including telexes and telephones: Escola Nautica de Mozambique C.P. 4180, Maputo, Mozambique, Tel. 28644

Senegal

(i) National Maritime Training School
C/O Ministry of Equipment
Dakar
Senegal

(ii) Nature of courses offered: Not available

Somalia

(i) Marine and Fisheries Training Institutes
C/O Ministry of Marine Transport and Ports
Mogadisho
Somalia Democratic Republic

(ii) Nature of courses offered - Not available

Tanzania

1. Dar-es-Salaam Maritime Training Unit

(i) The Unite was established in 1978 with the aid of NORAD. The two sections of the shcool, namely the Engineering and the Navigations Sections, are offering training for Tanzanian fleet only.

The courses offered are - Deck officers 3,4 and 5 classes, engin officers 3 and 4 master and service endorsements, deck and engin ratings, deck and engin refresher courses, pilots training, safety training etc.

(ii) Nature of courses offered - Not availalbe.

2. National Institute of Transport (NIT)

Information was not available during the preparation and when this publication will be reviewed after a year or so, complete information will be provided then.

TUNISIA

1. Name of Institution: Ecole de la Marine Marchande

2. Year of establishment: 31/12/1968

3. Place (location): SOUSSE

4. Duration of courses: 4 years, 2 years, 1 year

5. Languages used: French

6. Entry requirements: High School graduate in Science and Maths

7. Starting time and frequency: 1st October every year

8. Tuition fees (amount): 3500-4000 Dinars

9. Arrangements for accommodation: available

10. Cost of boarding and lodging: 100-150 Dinars per month

11. Is the course open to foreign trainees? Yes (on request)

12. Courses provided (nature and aim):

Courses for

- Naval engineering
- Deck officers
- Engin officers
- Maritime Transport economist

13. Complete address including telexes and telephones: 12 Rue Abdallah IBN Zoubeir, Telephone 03.26.211, 03.26.365, SOUSS, TUNIS.

TUNISIA

1. Name of Institution: Ecole de l'Aviation Civile et de la Meteorology

2. Year of establishment: 31/12/68

3. Place (location): BORJ EL AMRI TUNIS

4. Duration of courses: 4 years, 2 years, 1 year

5. Language used: French

6. Entry requirements: High School graduate in Science and Mathematics

7. Starting time and frequency: 1st October every year for 9 month

8. Tuition fees (amount): From 3500 - 6000 Dinars

9. Arrangements for accommodation: available

10. Cost of boarding and lodging: 100-200 Dinars per month

11. Is the course open to foreign trainees? Yes (on request)

12. Courses provided (nature and aim):

Courses for:-
- Pilots
- Engin officers
- Aviation Mechanics
- Air Transport economist

13. Complete address including telexes and telephones:

Aerodrome de BORJ EL AMRI, Telex 13906, Telephone 901522, Tunis

ANNEX I

Information received from African countries, UN Specialized Agencies, Inter-Governmental Organizations etc.

i. African countries that provided information directly to ECA up to December 31st 1986 were:-

Burundi
Central African Republic (no institute)
Gabon
Gambia (No institute)
Ghana
Ivory Coast
Kenya
Madagascar
Malawi
Mauritius (No institute)
Seychelles (No institute)
Tunisia
Uganda

ii. Information was received through IMO and UNCTAD of:

Algeria
Cape Verde
Egypt
Kenya
Libya
Mano River Union
Morocco
Mozambique
Nigeria
Niger
Senegal
Somalia
Tanzania
Tunisia

iii. Information on Ethiopian pilots, technicians school and personnel development centre was obtained by visiting the Ethiopian Airlines Headquarters.

iv. Information on ESAMI was collected from ESAMI publication.